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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,925	03/02/2004	Ta-Lee Yu	TS2000068BB	1437

7590 06/30/2004  
George O. Saile  
28 Davis Avenue  
Poughkeepsie, NY 12603

EXAMINER

FORDE, REMMON R

ART UNIT PAPER NUMBER

2826

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/790,925

Applicant(s)

YU, TA-LEE

Examiner

Remmon R. Fordé

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 18-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/15/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

Claims 18, 19 and 22 are objected to because of the following informalities:

In claim 18, line 20, change “;” to---.---

In claim 18, lines 8, 10, 11, 16 and 19, change “dopent” to---dopant---

In claim 19, line 22, change “dopent” to---dopant--- throughout entire claim.

In claim 22, on line 14, need to add a “.” at the end of the sentence.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 19, line 23, “the bases” lacks proper antecedent basis.

In claim 20, line 3, “said first collector regions” lacks proper antecedent basis.

In claim 21, line 7, “said third semiconductor base layer” lacks proper antecedent basis.

In claim 22, line 10, "said second semiconductor base horizontal contact region" lacks proper antecedent basis.

In claim 22, line 11, "said top horizontal collector contact" lacks proper antecedent basis.

In claim 22, lines 11 and 13, "said multiple emitter contact regions" lacks proper antecedent basis.

In claim 22, line 13, "the bottom horizontal collector contact" lacks proper antecedent basis.

In claim 22, line 14, "said base regions " lacks proper antecedent basis.

In claim 23, line 15, "said third semiconductor emitter regions" lacks proper antecedent basis.

In claim 23, line 18, "said horizontal emitter conductor stripes" lacks proper antecedent basis.

In claim 24, line 19, "said plurality of second semiconductor base region electrical contact conductor elements" lacks proper antecedent basis.

In claim 24, line 20, "said third semiconductor emitter region electrical contact conductors" lacks proper antecedent basis.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2826

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al..

Chen et al. discloses an integrated multiple vertical npn transistor ESD protection structure (40) on a semiconductor substrate (42), functionally connected to an integrated circuit pin (34) which will prevent electrostatic discharge damage to the integrated circuit provided with a first semiconductor layer (44) having a first conductivity dopant type (n+ layer); a second semiconductor layer (46) overlying the first semiconductor layer, having a similar conductivity type as the first layer, but a different dopant concentration (i.e. n-well layer); a third semiconductor layer (62) having a second conductivity dopant type (p-type), disposed in overlying relation to the second semiconductor layer; a plurality of first regions (50) of the first conductivity type (n+) electrically connecting with the first semiconductor layer, having a top element making electrical contact to the first regions and the first semiconductor layer; a plurality of second regions (56/64) of the second conductivity dopant type (p-type) laterally spaced from the first regions, being electrically connected to the third semiconductor layer having a top element making electrical contact to the second regions and the second semiconductor layer; a plurality of third regions (66) of the first semiconductor layer (n+ regions) laterally spaced and interposed between the second regions. (Column 3, line 27 – Column 4, line 64.)

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Remmon R. Fordé whose telephone number is (571) 272-1916. The examiner can normally be reached on Monday-Thursday (8:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Remmon R. Fordé

  
**Minhloan Tran**  
**Primary Examiner**  
**Art Unit 2826**